

N° 20,421



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## COMPLETE SPECIFICATION.

## Improvements in Automatic Fire-extinguishing Sprinklers.

I, JAMES HENRY LYNDE, of 17 Cooper Street, Manchester in the County of Lancaster, Civil Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

- 5 My invention relates to improvements in automatic fire extinguishing sprinklers and the object of my improvements is to produce a sprinkler of strong and simple construction capable of withstanding high pressures of water and of the highest degree of sensitiveness practicable.

- My improvements are particularly applicable to the construction of sprinklers for  
10 which I obtained Letters Patent numbered 18457 and dated December 18th 1888.

In performing my invention I use compound levers or other device for the purpose of maintaining a valve face in close contact with a valve seat.

- When I use compound levers one end of the secondary or last lever is supported on a lip inside the cover or by other part of the sprinkler and the other end of the lever  
15 is according to my invention secured in position by a special form of sensitive solder joint or connection as hereinafter described and pointed out in the claims.

And in order that my invention may be fully understood and readily carried into effect I will describe the accompanying Sheet of Drawings reference being had to the figures and letters marked thereon.

- 20 Fig. 1 is a side view of the sprinkler (closed).

Fig. 2 is a side view of the sprinkler (open).

Fig. 3 is a section of the sprinkler.

Fig. 4 is a cross section of the compound levers.

Fig. 5 is a view of the top of the sprinkler.

- 25 Fig. 6 is a view of the underside of the sprinkler.

Similar letters refer to similar parts throughout the several views.

- In these views—*a* represents the body of the sprinkler, *b* the cover which is threaded on to the body *a*; *c* represents the distributor and supports it in its proper position when the sprinkler is open by means  
30 of the gallery *e* to which it is secured; *f* represents the upper or primary lever one end of which is supported by the internal lip *b'* of the cover *b* and the other rests upon the secondary lever *g* one end of which is supported by the internal lip *b'* and the other end is held in position by means of the flanged tubes *k* and *l* which are soldered to one another and are supported in the bracket *h* which is part of the cover *b*.  
35 Between the bracket *h* and the flange of the tube *k* and also between the end of the secondary lever *g* and the flange of the tube *l* washers *i* made of material having a low power of conducting heat are inserted.

- By these means I insulate that portion of the sprinkler which forms the sensitive joint from metallic contact with the body of the sprinkler and so reduce to a minimum  
40 the weight of metal that must necessarily be heated up to the melting point of the sensitive solder and thus render the apparatus more sensitive to heat than it otherwise would be.

- I form the sensitive connection of tubular shape in order to secure the greatest strength with the smallest weight of metal and also in order that in case of a fire the  
45 heat may be communicated both internally and externally simultaneously, thus providing as large a heating surface as possible.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

- 50 1. In an automatic sprinkler a sensitive joint or connection formed of flanged

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*Lynde's Improvements in Automatic Fire-extinguishing Sprinklers.*

metallic tubes fitting one within the other and soldered together with sensitive solder and insulated by non-conducting material from metallic contact with the parts of the sprinkler to which they are attached.

2. The combination with an automatic sprinkler substantially as herein shown and described, of a sensitive joint or connection formed of flanged metallic tubes fitting one within the other and soldered together with sensitive solder and insulated by non-conducting material from metallic contact with the parts of the sprinkler to which they are attached. 5

Dated this 18th day of December 1889.

H. B. BARLOW,  
17, St. Ann's Square, Manchester, Agent for Applicant. 10

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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

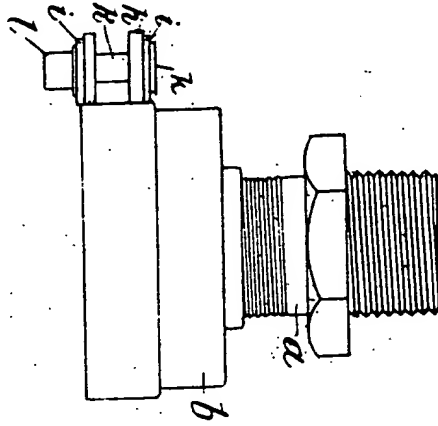


Fig. 2.

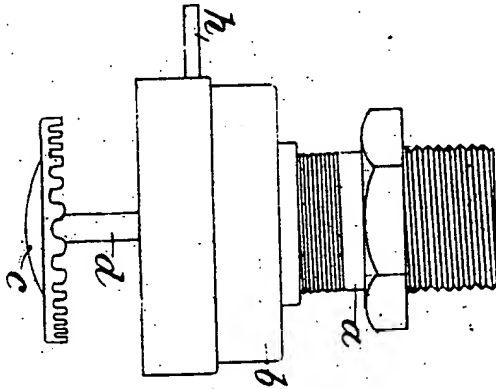


Fig. 3.

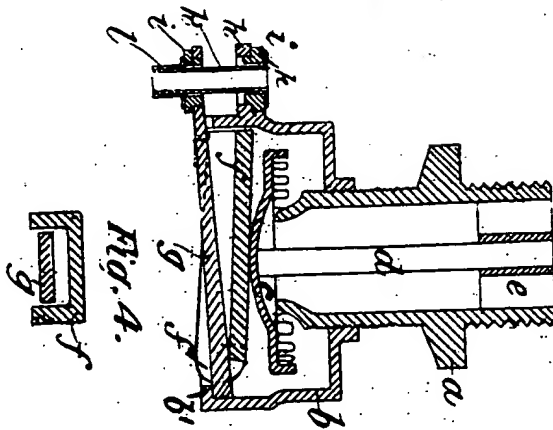


Fig. 4.



Fig. 5.

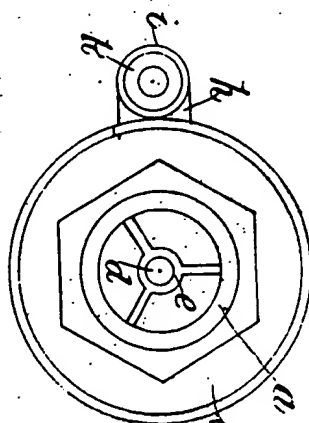


Fig. 6.

